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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,885	10/07/2003	Geoffrey Frank Deane	INOGN.005A	6432

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EXAMINER	
PATEL, NIHIR B	

ART UNIT	PAPER NUMBER
3772	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/680,885	DEANE ET AL.	
	Examiner	Art Unit	
	Nihir Patel	3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10.07.2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,9-18,22 and 23* is/are rejected.

7)☒ Claim(s) *4-8,19-21 and 24-26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10.07.2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8.29.2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims **1-3 and 9-17** are rejected under 35 U.S.C. 102(b) as being anticipated by McCombs (US 5,871,564).

3. **As to claim 1,** McCombs teaches a pressure swing adsorption apparatus that comprises a compressor **24** which compresses a gas, such as air, to provide a feed gas **(see column 3 lines 30-40)**; a plural adsorbent beds **60 and 62** which receive the feed gas and output a purified gas and a waste gas **(see column 3 lines 50-60 and column 4 lines 1-10)**; a battery **173** which supplies power to the compressor **(see column 10 lines 1-15)**; and a housing **20** which comprises an ambient air inlet **22,** an ambient air outlet **126,** and plural compartments, a first of which contains the absorbent beds **60 and 62** and a second of which contains the compressor **24**, the compartment inhibit migration of thermal energy from the second compartment to the first compartment **(the heat exchanger 108 provides the thermal energy that is migrated from the second compartment to the first compartment; see column 3 lines 45-55)**.

4. **As to claim 2,** McCombs teaches an apparatus that further comprises an air circulation fan **63** which draws air through the inlet into the first compartment, and through the first compartment into the second compartment and the air being exhausted through the outlet **(inherently the fan can draw air through the inlet into the first compartment, and through**

the first compartment into the second compartment and the air exhausted throught the outlet).

5. **As to claim 3,** McCombs teaches an apparatus that further comprises a circuitous air passageway through which the air is directed to flow, the air passageway having an upstream portion and a downstream portion **(see columns 3 and 4).**

6. **As to claim 9,** McCombs teaches an apparatus that comprises a housing **28 (see page 3 and column 4 lines 60-67)** that comprises a chassis **26 (the base is defined as the chassis)** and a shell **(panels back panel (not shown); panel 38, left panel 40 and right panel 42 is defined as the shell)**; and a plurality of components mounted on and structurally supported by the chassis, the shell covering the components and removable from the chassis without removing the components **(see column 4 lines 60-67).**

7. **As to claim 10,** McCombs teaches an apparatus wherein the shell has an opening adapted to receive a filter **198** which filters fluid output from the apparatus, the filter being accessible from the exterior of the shell **(see column 4 lines 20-30 and column 5 lines 10-25).**

8. **As to claim 11,** McCombs teaches an apparatus wherein the shell has plurality of sidewalls **(see figure 3),** at least one sidewall having a concave or convex section that provides curvature to the sidewall so as to reduce coupling of sound or vibration energy generated by components in the housing **(see figure 3-5).**

9. **As to claim 12,** McCombs teaches an apparatus wherein the chassis comprises a plurality of integral structures adapted to receive and support the components **(see figures 3 and 4 and column 4 lines 65-67 and column 5 lines 1-10).**

10. **As to claim 13,** McCombs teaches an apparatus wherein the chassis comprises an integral compressor mount **(see figures 3 and 4 and column 5 lines 10-25).**

11. **As to claim 14,** McCombs teaches an apparatus wherein the chassis comprises an integral battery slot **(see figures 3 and 4 and column 10 lines 1-15 and column 5 lines 10-25).**

12. **As to claim 15,** McCombs teaches an apparatus wherein the chassis comprises at least one integral gas flow passageway **(see figures 3 and 4 and column 5 lines 10-25).**

13. **As to claim 16,** McCombs teaches an apparatus wherein the chassis provides an intermediary vibration isolation between the component and the shell **(see figures 3 and 4 and column 5 lines 10-25).**

14. **As to claim 17,** McCombs teaches an apparatus wherein the housing further comprises a hatch that is removably attached to the shell so as to provide access to one or more components therein **(any one of the panels can be defined as a hatch; see figures 3-5 and column 4 lines 60-67).**

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claim **22** is rejected under 35 U.S.C. 103(a) as being unpatentable over McCombs (US 5,871,564).

18. **As to claim 22,** McCombs teaches a method step of providing an oxygen concentrator **20,** having an air compressor **24** which supplies compressed air to a PSA unit **(see column 3 lines 30-40),** the PSA unit comprising plural adsorbent beds **60 and 62** and a plurality of valves **116 and 118** which control fluid flow to and from the beds **(see column 3 lines 50-60 and column 4 lines 1-10);** generating an air flow through the concentrator by inputting air through an inlet **82a** and outputting the air through the outlet **84a (see figure 2),** such that the air flow along a flow path through concentrator; and exposing the valves to an upstream portion of the flow path, such that the valves are substantially isolated from air that flows through the downstream portion of the flow path **(see figure 2; column 3 lines 50-60 and column 4 lines 35-45).**

The claimed method step would have been obvious because it would have resulted from the use of the device by McCombs.

19. **As to claim 23,** McCombs teaches a method step that further comprises directing the air flow to flow along a circuitous flow path through the concentrator **(see columns 3 and 4).**

The claimed method step would have been obvious because it would have resulted from the use of the device by McCombs.

20. Claim **18** is rejected under 35 U.S.C. 103(a) as being unpatentable over McCombs (US 5,871,564) in view of Jidosha (JP2002231321).

21. **As to claim 18,** McCombs substantially discloses an apparatus that discloses a compressor **24** that produces a feed gas **(see column 3 lines 30-40);** plural adsorbent beds **60 and 62** connected to receive the feed gas and produce a purified gas and a waste gas from the feed gas **(see column 3 lines 50-60 and column 4 lines 1-10);** a battery **173 (see column 10 lines 1-15)**; but does not disclose the concept of a conduit connected to deliver the waste gas to the battery to cool the battery. Jidosha teaches an apparatus that does provide the concept of a conduit connected to deliver the waste gas to the battery to cool the battery **(see basic abstract)**. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify McCombs's invention by providing a conduit connected to deliver the waste gas to the battery to cool the battery as taught by Jidosha in order to ensure sufficient cooling efficiency.

Drawings

22. The drawings are objected to because it appears that some reference numbers have been cutoff from figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Allowable Subject Matter

23. Claims **4-8, 19-21 and 24-26** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not disclose a fan that is positioned directly above the compressor that produces an air stream directly against the compressor; plurality of sound absorbing baffles positioned along at least a portion of the airway.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nihir Patel whose telephone number is (571) 272-4803. The examiner can normally be reached on 7:30 to 4:30 every other Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit 3772

Nihir Patel

12/11/06